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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,281	08/30/2001	Fred S. Cook	1494	8810
28004	7590	03/09/2005	EXAMINER DAVIS, CYNTHIA L	
SPRINT 6391 SPRINT PARKWAY KSOPHT0101-Z2100 OVERLAND PARK, KS 66251-2100			ART UNIT 2665	PAPER NUMBER

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/943,281

Applicant(s)

COOK, FRED S.

Examiner

Cynthia L Davis

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-55 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)     | Paper No(s)/Mail Date. ____.  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.   | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-2, 4, 6-8, 11, 13-14, 16, 18-20, and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Voit (6157648).

Regarding claim 1, a service provider is disclosed in Voit, column 2, line 14. A first user communication device configured to communicate with the service provider over a first link is disclosed in column 5, lines 4 (the ITG). A second user communication device configured to communicate with the service provider over a second link, determine a need for additional bandwidth and transmit a request for the additional bandwidth, receive an instruction message responsive to the request that grants the second user communication device access to available bandwidth on the first link, and communicate with the service provider over a third link and the first link at the available bandwidth wherein the third link connects the second user communication device and the first user communication device is disclosed in column 6, line 56-column 7, line 3 (the end client communication device sends a request to the ISP to start a call,

i.e., to receive bandwidth; receives authorization from the ISP, which gives the client device the requested bandwidth; and then connects to the appropriate ITG).

Regarding claim 13, in a first user communication device, communicating with a service provider over a first link is disclosed in Voit, column 2, line 14 (disclosing an ISP) and column 5, line 4 (the ITG is connected to the ISP). In a second user communication device communicating with the service provider over a second link, determining a need for additional bandwidth and transmitting a request for the additional bandwidth, receiving an instruction message responsive to the request that grants the second communication device access to available bandwidth of the first link, and communicating with the service provider over a third link and the first link at the available bandwidth wherein the third link connects the second user communication device and the first user communication device is disclosed in column 6, line 56-column 7, line 3 (the end client communication device sends a request to the ISP to start a call, i.e., to receive bandwidth; receives authorization from the ISP, which gives the client device the requested bandwidth; and then connects to the appropriate ITG).

Regarding claim 25, a software product for use in a communication system that provides bandwidth sharing is disclosed in Voit, column 8, lines 46-49 (the system is implemented in software). An ISP is disclosed in column 2, line 14. A first communication device is disclosed in column 5, line 4 (the ITG is connected to the ISP). Bandwidth sharing software configured when executed by a processing system in the second user communication system to determine a need for additional bandwidth and transmit a request for the additional bandwidth, receive an instruction message

responsive to the request that grants the second user communication device access to available bandwidth on the first link, and communicate with the service provider over a third link and the first link at the available bandwidth wherein the third link connects the second user communication device and the first user communication device, and storage media configured to store the bandwidth sharing software is disclosed in column 6, line 56-column 7, line 3 (the end client communication device sends a request to the ISP to start a call, i.e., to receive bandwidth; receives authorization from the ISP, which gives the client device the requested bandwidth; and then connects to the appropriate ITG).

Regarding claims 2, 14, and 26, the second user communication device is further configured to establish the third link with the first user communication device responsive to the reply message is disclosed in column 6, lines 63-65 (when the bandwidth for the call is granted, the client device connects to the ITG).

Regarding claims 4, 16, and 28, the third link comprises a wire line link is disclosed in figure 1 of Voit.

Regarding claims 6 and 18 the first user communication device is further configured to: determine the available bandwidth of the first link and indicate the available bandwidth to the second user communication device is disclosed in column 5, lines 35-43 (the ITG lets the ISP know what bandwidth resources it has available, and notifies the client device via the ISP).

Regarding claims 7 and 19, the first user communication device is further configured to: determine the available bandwidth of the first link and indicate the available bandwidth to the service provider in Voit, column 5, lines 35-38.

Regarding claims 8 and 20, the first user communication device is further configured to generate a link sharing contract for the available bandwidth of the first link that specifies a type of link access to the first link is disclosed in column 5, lines 63-65 (the ITG negotiates a billing algorithm with the client at the time of connection).

Regarding claims 11 and 23, the service provider is configured to bill the second user communication device based on the link sharing contract is disclosed in column 6, lines 18-21.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 5, 17, 29-31, 33, 35-37, 40, 42-43, 45, 47-49, 52, and 54-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voit (6157648) in view of Pasternak.

Regarding claims 5, 17, and 29, the third link comprises a wireless link is missing from Voit. However, Pasternak discloses in figure 1 a wireless network. It would have been obvious to one skilled in the art at the time of the invention to have the third link be wireless. The motivation would be to use a common, convenient type of connection.

Regarding claim 30, a first user communication device configured to communicate with a service provider over a first link is disclosed in column 5, line 4 (the ITG is connected to the ISP). A second user communication device configured to communicate with a service provider over a second link is disclosed in column 6, lines 56-57 (disclosing the client device communicating with the ISP). The second user communication device further configured to receive the instruction message and communicate with the service provider over a third link and the first link at the available bandwidth responsive to the instruction message wherein the third link connects the second user communication device and the first user communication device is disclosed in Voit, column 6, lines 61-column 7- line 3 (the client device receives permission to start the call, and connects to the ITG). A service provider configured to determine a need to provide additional bandwidth to the second user communication device, determine available bandwidth on the first link, generate and transmit an instruction message responsive to the determination of the available bandwidth on the first link that grants the second user communication device access to the available bandwidth on the first link is missing from Voit. However, Pasternak discloses in column 2, lines 56-57, a request-less scheduler that allocates bandwidth to client devices based on both the available and needed bandwidth of the system. It would have been obvious to one skilled in the art at the time of the invention to use request-less scheduling in the system of Voit. The motivation would be to be able to be able to allocate more bandwidth to a call on the fly without using up bandwidth for request messages.

Regarding claim 42, in a first user communication device, communicating with a service provider over a first link is disclosed in Voit, column 5, line 4 (the ITG is connected to the ISP). In a second user communication device, communicating with the service provider over a second link is disclosed in column 6, lines 56-57 (disclosing the client device communicating with the ISP). In the second user communication device, receiving the instruction message and communicating with the service provider over a third link and the first link at the available bandwidth responsive to the instruction message wherein the third link connects the second user communication device and the first user communication device is disclosed in Voit, column 6, lines 61-column 7- line 3 (the client device receives permission to start the call, and connects to the ITG). In the service provider, determining a need to provide additional bandwidth to the second user communication device, determine available bandwidth on the first link, generating and transmitting an instruction message responsive to the determination of the available bandwidth on the first link that grants the second user communication device access to the available bandwidth on the first link is missing from Voit. However, Pasternak discloses in column 2, lines 56-57, a request-less scheduler that allocates bandwidth to client devices based on both the available and needed bandwidth of the system. It would have been obvious to one skilled in the art at the time of the invention to use request-less scheduling in the system of Voit. The motivation would be to be able to be able to allocate more bandwidth to a call on the fly without using up bandwidth for request messages.



Regarding claim 54, a software product for use in a communication system that provides bandwidth sharing is disclosed in Voit, column 8, lines 46-49 (the system is implemented in software). An ISP is disclosed in column 2, line 14. A first communication device is disclosed in column 5, line 4 (the ITG is connected to the ISP). Bandwidth sharing software configured when executed by a processing system in the service provider to determine a need to provide additional bandwidth to the second user communication device, determine available bandwidth on the first link, generate and transmit an instruction message responsive to the determination of the available bandwidth on the first link that grants the second user communication device access to the available bandwidth on the first link, and storage media configured to store bandwidth sharing software is missing from Voit. However, Pasternak discloses in column 2, lines 56-57, a request-less scheduler that allocates bandwidth to client devices based on both the available and needed bandwidth of the system. It would have been obvious to one skilled in the art at the time of the invention to use request-less scheduling in the system of Voit. The motivation would be to be able to be able to allocate more bandwidth to a call on the fly without using up bandwidth for request messages.

Regarding claims 31, 43, and 55, the second user communication device is further configured to establish the third link with the first user communication device responsive to the reply message is disclosed in column 6, lines 63-65 (when the bandwidth for the call is granted, the client device connects to the ITG).

Regarding claims 33 and 45, the third link comprises a wire line link is disclosed in figure 1 of Voit.

Regarding claims 34 and 46, the third link comprises a wireless link is missing from Voit. However, Pasternak discloses in figure 1 a wireless network. It would have been obvious to one skilled in the art at the time of the invention to have the third link be wireless. The motivation would be to use a common, convenient type of connection.

Regarding claims 35 and 47, the first user communication device is further configured to: determine the available bandwidth of the first link and indicate the available bandwidth to the second user communication device is disclosed in column 5, lines 35-43 (the ITG lets the ISP know what bandwidth resources it has available, and notifies the client device via the ISP).

Regarding claims 36 and 48, the first user communication device is further configured to: determine the available bandwidth of the first link and indicate the available bandwidth to the service provider in Voit, column 5, lines 35-38.

Regarding claims 37 and 49, the first user communication device is further configured to generate a link sharing contract for the available bandwidth of the first link that specifies a type of link access to the first link is disclosed in column 5, lines 63-65 (the ITG negotiates a billing algorithm with the client at the time of connection).

Regarding claims 40 and 52, the service provider is configured to bill the second user communication device based on the link sharing contract is disclosed in column 6, lines 18-21.

3. Claims 3, 15, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voit (6157648) in view of Becker.

Regarding claims 3, 15, and 27, the first link and the second link comprise Digital Subscriber Line (DSL) service links is missing from Voit. However, user of digital subscriber lines in a network is disclosed in Becker, column 16, lines 5-6. It would have been obvious to one skilled in the art at the time of the invention to use DSL lines in the system of Voit. The motivation would be to use a common type of connection.

4. Claims 9 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voit (6157648) in view of Yoshihura.

Regarding claims 9 and 21, the link access comprises an interruptible access to the first link is missing from Voit. However, Yoshihura discloses in column 5, lines 56-57, an interruptible connection. It would have been obvious to one skilled in the art at the time of the invention to offer an interruptible connection in the system of Voit. The motivation would be to have a lower QoS to offer to client devices if bandwidth requirements necessitated it.

5. Claims 10 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voit (6157648) in view of Bodnar.

Regarding claims 10 and 22, the link access comprises a non-interruptible access to the first link is missing from Voit. However, Bodnar discloses in column 5, lines 61-62, a non-interruptible connection. It would have been obvious to one skilled in the art at the time of the invention to offer a non-interruptible connection in the system of Voit. The motivation would be to have a higher QoS to offer to client devices.

6. Claims 12 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voit (6157648) in view of Voit (6289010).

Regarding claims 12 and 24, the service provider is configured to bill the first user communication device based on the link sharing contract is missing from Voit (6157648). However, Voit (6289010) discloses in column 2, lines 2-4, a gateway that has bandwidth resources that it sells to customers. It logically follows that the gateway must get its bandwidth from an ISP, which would bill the gateway for the bandwidth. It would have been obvious to one skilled in the art at the time of the invention to bill the gateway for bandwidth based on the link sharing contract. The motivation would be to allow the gateway to use resources belonging to other companies.

7. Claims 32 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voit (6157648) in view of Pasternak in further view of Becker.

Regarding claims 32 and 44, the first link and the second link comprise Digital Subscriber Line (DSL) service links is missing from Voit. However, user of digital subscriber lines in a network is disclosed in Becker, column 16, lines 5-6. It would have been obvious to one skilled in the art at the time of the invention to use DSL lines in the system of Voit. The motivation would be to use a common type of connection.

8. Claims 32 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voit (6157648) in view of Pasternak in further view of Yoshihura.

Regarding claims 38 and 50, the link access comprises an interruptible access to the first link is missing from Voit. However, Yoshihura discloses in column 5, lines 56-57, an interruptible connection. It would have been obvious to one skilled in the art at

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the time of the invention to offer an interruptible connection in the system of Voit. The motivation would be to have a lower QoS to offer to client devices if bandwidth requirements necessitated it.

9. Claims 32 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voit (6157648) in view of Pasternak in further view of Bodnar.

Regarding claims 39 and 51, the link access comprises a non-interruptible access to the first link is missing from Voit. However, Bodnar discloses in column 5, lines 61-62, a non-interruptible connection. It would have been obvious to one skilled in the art at the time of the invention to offer a non-interruptible connection in the system of Voit. The motivation would be to have a higher QoS to offer to client devices.

10. Claims 32 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voit (6157648) in view of Pasternak in further view of Voit (6289010).

Regarding claims 41 and 53, the service provider is configured to bill the first user communication device based on the link sharing contract is missing from Voit (6157648). However, Voit (6289010) discloses in column 2, lines 2-4, a gateway that has bandwidth resources that it sells to customers. It logically follows that the gateway must get its bandwidth from an ISP, which would bill the gateway for the bandwidth. It would have been obvious to one skilled in the art at the time of the invention to bill the gateway for bandwidth based on the link sharing contract. The motivation would be to allow the gateway to use resources belonging to other companies.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia L Davis whose telephone number is (571) 272-3117. The examiner can normally be reached on 8:30 to 6, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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